ENVIRONMENTAL CHEMISTS

Date of Report: 12/16/97 Date Received: 12/03/97

Project: Metro Self Monitor, PO #M59257

Date Samples Extracted: 12/11/97 Date Extracts Analyzed: 12/11/97

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, ZINC USING METHOD 6010

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

<u>Sample ID</u>	Chromium	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M59257	0.34	0.21	0.39	< 0.05
Method Blank	< 0.05	<0.05	<0.05	< 0.05

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Project: Metro Self Monitor, PO #M59257

QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 712013-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicat Result	Relative e Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.34	0.34	0	0-20
Copper	mg/L (ppm)	0.21	0.22	5	0-20
Nickel	mg/L (ppm)	0.39	0.42	7	0-20
Zinc	mg/L (ppm)	< 0.05	< 0.05	nm	0-20

Laboratory Code: 712013-01 (Matrix Spike)

	Reporting	Spike	Sample	% Recove	ery % Recove	ery Acceptance	
Analyte	Units	Level	Result	MS	MSD	Criteria	RPD
Chromium	mg/L (ppm)	5	0.34	103	106	80-120	3
Copper	mg/L (ppm)	5	0.21	104	107	80-120	3
Nickel	mg/L (ppm)	10	0.39	103	103	80-120	0
Zinc	mg/L (ppm)	5	< 0.05	102	105	80-120	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recove	ry % Recove LCSD		e RPD)
Chromium	mg/L (ppm)	5	108	104	80-120	4	5.7
Copper	mg/L (ppm)	5	108	106	80-120	2	
Nickel	mg/L (ppm)	10	107	104	80-120	3	
Zinc	mg/L (ppm)	5	106	104	80-120	2	

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282

PJ# 712013

1:15

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FORMS/COC

06/09/97

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

December 16, 1997

DUPLICATE COPY

INVOICE #97ACU1216-1

Accounts Payable Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

RE: Project Metro Self Monitor, PO #M59257: Results of testing requested by Gerry Thompson for material submitted on December 3, 1997.

1 water sample analyzed for
Chromium, Copper, Nickel, and Zinc
using Method 6010 @ \$65 per sample

\$ 65.00

Amount Due \$ 50.00

FEDERAL TAX ID (b) (6)

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

December 16, 1997

Gerry Thompson, Project Manager Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on December 3, 1997 from your Metro Self Monitor, PO #M59257 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Kurt Johnson Chemist

Enclosures ACU1216R.DOC